

What You Need to Know About Automotive LED Replacement Lighting

Automotive LED replacement lighting is an emerging technology in the marketplace today. However, a lot of people don't know that these replacements also come with warnings and specific usage information. NAPA® Lamps prides itself on keeping up-to-date on the latest automotive lighting industry trends and standards as well as the applicable laws on product usage. Our goal is to provide this information to ensure you have all of the facts needed to make a good buying decision.

External Automotive LED Lighting Products

External LED automotive lighting products are meant as a replacement for OEM incandescent lighting when used for off-road and show use only. The packaging for these products should be labeled with this warning since these lamps are likely not street legal. What renders the product as non street legal is that, in the majority of cases, when an exterior incandescent bulb/socket is replaced with an LED the beam pattern is not suitable for street use, and the bulb may interfere with other components of the vehicle's electrical system and/or require additional wiring or resistor installation.

Only sealed beam LEDs or LED replacement kits that include the housing, reflector and LED system are street legal and can meet DOT compliance. However, you still may experience some wiring complications.



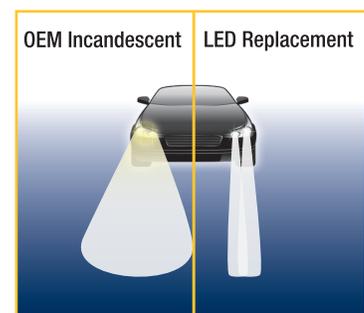
LED Capsule

LED Sealed Beams



Important Information About Exterior LED Automotive Lighting

- LEDs should not be substituted for incandescent headlamp bulbs in the same housing as the OEM headlight. Not only would photometry likely be compromised but the internal heat generated by the LEDs could cause melting of the socket and the LED diodes would prematurely fail destroying the wire harness in the process.
- OEM vehicles with 3057KX/3157KX should not have LED replacements installed. These GM applications with daytime running lights may experience early failure due to pulsed voltage.
- LEDs may not be as bright as standard exterior light bulbs. Therefore, the light disbursement may not align with existing reflectors which then renders the vehicle illegal for street use.
- When replacing turn signal applications with an LED bulb it may be necessary to also replace the signal flasher module. Since some cars use open circuits from bulbs to control flash rate and warning lamps the LED will have too low of a draw and return too much voltage back to the module signaling the bulb is burnt-out.
- It may be necessary to install load resistors to eliminate issues from the low power draw from the circuit on newer vehicles that have indicator warning lamps on the instrument panel which indicate the bulb is burnt-out due to low power. This may also be necessary on vehicles that disable the cruise control system if a brake light bulb is indicated as bad.
- LED and incandescent bulbs should not be mixed on the same circuit. Inconsistent power draw can cause lights to dim or flash with variable timing.



Best Option for LED Installation

Install an approved LED retrofit lamp assembly validated for specific vehicles/models. The full assembly would include LEDs, electronics, heat sink(s) for thermal management, connector(s), as well as an engineered optical beam pattern.